

Velocity Template Examples

Office of Operational Services (OOS)

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This document is only valid for TO-8 Release of AWIPSII.
It will have to be updated as new information comes available and with subsequent releases. It should be considered for informational purposes only.

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About this Guide

The Velocity Template Examples Document is intended to provide some examples at modifying the Velocity Templates

Level of Effort

The examples in this document were used to determine the level of effort that it would take to customize the templates at the field sites. In general, the items that are configurable are done so in a straight forward manner by modifying the template and/or configuration files. There are several items that do not appear to be configurable or were not able to be modified in a reasonable time (days).

1. Prerequisites
 - a. Read the Velocity Users Guide
 - b. Read the Velocity Template Language Document
2. Text Wording Changes
 - a. Requires minimal effort
 - i. The templates contain a mixture of raw text and VTL code
 - ii. A simple text editor is used to change the text in the template
3. Adding/Changing Bullets
 - a. Requires moderate effort
 - i. Bullets contain variables that must be matched in the cfg and vm files
 - b. Requires Testing
 - i. Bad variable names can render warngen inoperable.
4. Localization
 - a. Requires moderate effort
 - i. modification to config.xml files
 - ii. May Require Server Restart
 - iii. Not completely implemented
5. Spatial Data
 - a. Requires significant effort
 - i. Spatial Data Modifications unclear
 - ii. Source of Spatial data unknown
 - iii. Effect of modifications to cfg unclear
6. Template Logic
 - a. Requires significant effort
 - i. Knowledge of Reference Document
 1. Refers to available variables
 - ii. Knowledge of JAVA objects
 1. Refers to accessible objects



- iii. Knowledge of Velocity Template Language
 - 1. Simple scripting logic
- b. Requires Testing
 - i. Incorrect logic can render WarnGen inoperable

Attempted Tasks:

1. durations - modify or add new durations
 - a. **Pass**
2. durations – Set default
 - a. **Fail** – Duration was hardcoded
3. modify the local time zone
 - a. **Fail** - Timezone utilizes java date time utils
4. WFO ID - this isn't changed often, but would be nice if it were easily configured
 - a. **Fail** –WFO ID could be changed but causes warngen crash
 - b. NOTE: Localization would fix this but not implemented yet
5. WFO city name - this isn't changed often, but would be nice if it were easily configured (both long name and short name)
 - a. **Pass** – Modify config.xml file
6. first bullet - describing portions of counties (be able to accommodate parishes, municipalities, etc)
 - a. **Pass** -
7. first bullet - include/exclude cities in first bullet, limiting the number of cities in the first bullet
 - a. **Pass** – Unable to control precisely
8. first bullet - change % of county which must fall within polygon to be included in warning (now is zero by default)
 - a. **Fail** - Could not set percentage of county
9. third bullet - basis for warning (add a new one or modify an existing one) - how strictly is the wording controlled by OCWWS?
 - a. **Pass**
10. third bullet - threats (add a new one or modify an existing one) - how strictly is the wording controlled by OCWWS?
 - a. **Pass**
11. third bullet storm location - define distances for "over", "near", etc.
 - a. **Pass**
12. third bullet storm location - add new cities, landmarks or modify existing ones (AWIPS I - CitiesInfo.txt, LocalCitiesInfo.txt file)
 - a. **Fail** – Cities could not be modified
13. third bullet storm location - change priority of existing cities (AWIPS I category 1, 2, 3)
 - a. **Fail**



14. third bullet storm location - have the ability to treat a location as a polygon instead of a point
 - a. **Fail**
15. pathcast - allow for pathcast or alternative list of cities on GUI
 - a. **Fail**
16. pathcast - city selection - items 10, 11, 12, 13 apply
 - a. **Fail**
17. CTA - add a new CTA or modify existing CTA - how strictly are these controlled by OCWWS?
 - a. **Pass**
18. forecaster name/initials - allow a menu to select forecaster ID
 - a. **Fail**

Note: Some of the geospatial tasks (8,14-16) may be accomplished with modifications to the existing configuration files. The instructions, documentation, and code were not clear and the effect of modifying the configuration file produced unpredictable results.

Durations

Modify Durations settings.

Time : < 1 hour

Task 1a. Modify existing Duration in the menu.

Task 1b. Add new Durations option to the menu.

Task 1a

1. Navigate to the WarnGen template folder.
 - a. <CaveInstallDirectory>/Cave/etc/warngen
2. Locate the file: "severethunderstorm.cfg"
3. Copy the file to severethunderstorm.cfg.orig
4. Open the file with an xml compatible text editor.
 - a. The cfg files are in xml format.
5. Locate the line: "<duration>10</duration>"
 - a. Change the value of 10 to 12.
6. Save the file.
7. Open warngen and verify the change.
 - a. Select severe thunderstorm
 - b. Select the durations pull down.
 - c. Verify the change.

Task 1b



1. Navigate to the WarnGen template folder.
 - a. <CaveInstallDirectory>/Cave/etc/warngen
2. Locate the file: "severethunderstorm.cfg"
3. Copy the file to severethunderstorm.cfg.orig
4. Open the file with an xml compatible text editor.
 - a. The cfg files are in xml format.
5. Locate section with the "<duration>xx</duration>" tags.
 - a. Add a new line at the end of the section
 - i. <duration>120</duration>
 - b. Ensure that the new line is BEFORE the </durations> tag
6. Save the file.
7. Open warngen and verify the change.
 - a. Select severe thunderstorm
 - b. Select the durations pull down.
 - c. Verify the change.

NOTE: It is not possible to set the default durations setting without code modifications and recompile as of TO-8.

Time Zone

Time : unknown

Modify the local time zone.

The tests showed that the timezone could not be changed and was not related to the location of the warning. A TTR was created.

The timezone functions appear to be an implementation of the java.util.timezone object. There is also a database table name timezone but it is currently empty.

WFO ID

Time : < 1 hour

Change the WFO ID.

The WFO ID appears to be editable in the configuration file:

./edex/opt/data/utility/cave_config/site/koax/com.raytheon.viz.core



Editing this file causes a localization error on cave startup but does not appear to affect the output to the warning products.

Unable to change in TO8.

WFO city name

Time : < 1 hour

Task 3 Modify the city Name.

The city name is modified by editing the WarnGen configuration file.

1. Navigate to :
 - a. `./edex/opt/data/utility/cave_config/site/koax/com.raytheon.viz.warngen`
 - b. Open `config.xml`
 - c. Edit the tag `<warngenOfficeShort>My short name</warngenOfficeShort>`
 - d. Edit the tag `<warngenOfficeLong> NWS mysite </warngenOfficeLong>`
 - e. Save the file.
 - f. Restart Cave.
2. Note: This `config.xml` file is only used to populate the templates when a warning is issued. The template must contain a reference to the variables:
 - a. `${officeLong}`
 - b. `${officeShort}`

County/Parish/Municipality

Time : < 1 hour

County/Parish/Municipality is controlled by a file in `cave/etc/warngen/countyTypes.txt`
This file contains a reference to:

LA \ PARISH
DEFAULT \ COUNTY

Adding a State Identifier and a label for the “county” causes the textproduct to contain the new label.

Example: (demo purposes)

1. Open `/etc/warngen/countTypes.txt`
2. Add the line `NE \ FARMZONE`
3. Restart Cave
4. Open WarnGen and generate a warning product.



- Note that the warning product has renamed COUNTY to FARMZONE.

User ID – Select

Time : Unknown

This feature is not implemented in TO-8.

Bullet – Basis, Threats, Call to Action

Time : < 2 hours

The Bullets for Storm Basis, Threats, and Call to Action are edited by modifying both the <template>.cfg file and the <template>.vm file.

The <template>.cfg file controls the display in the WarnGen Gui. The <template>.vm file controls the text inserted into text product.

Example: Change WarnGen dialog to display “Radar Indicated” instead of “Doppler Radar Indicated”.

- Navigate to the file /etc/warngen/tornado.cfg
- Edit the file
 - Change the line:

<bullet bulletName="doppler" bulletText="Doppler radar indicated"/>

To :

<bullet bulletName="doppler" bulletText="Radar indicated"/>

- Save the file
- Restart Cave and Launch Warngen
- Note the change to the Storm Basis section.

Example: Add a new threat: “35MPH WIND”

- Navigate to the file /etc/warngen/severethunderstorm.cfg
- Edit the file
 - Locate the lines

```
<bullet bulletText="***** THREAT (CHOOSE 1 each wind/hail) *****"/>
<bullet bulletName="60mphWind" bulletText="60 mph wind"/>
```

- Add a new line before the line containing “60 mph wind”

```
<bullet bulletText="***** THREAT (CHOOSE 1 each wind/hail) *****"/>
<bullet bulletName="35mphWind" bulletText="35 mph wind"/>
<bullet bulletName="60mphWind" bulletText="60 mph wind"/>
```

- Save the file.
- Navigate to the file /etc/warngen/severethunderstorm.vm
- Edit the file

- Locate the lines

```
## Handle Wind Possibilities
#if({list.contains($bullets, "60mphWind")})
  #set ($wind = "DAMAGING WINDS IN EXCESS OF 60MPH")
```




#end

7. Add new lines after the line: “## Handle Wind Possibilities”

```
## Handle Wind Possibilities
#if({list.contains($bullets, "35mphWind")})
  #set ($wind = "DAMAGING WINDS IN EXCESS OF 35MPH")
#end
#if({list.contains($bullets, "60mphWind")})
  #set ($wind = "DAMAGING WINDS IN EXCESS OF 60MPH")
#end
```

8. Save the file
9. Restart Cave
10. Launch Warngen, and verify changes.

NOTE: The “\$bullets” text in the <template>.vm file MUST match the “bulletName” text in the <template>.cfg file.

Example: Add a new Call to Action

Follow instructions for adding a threat just place the bullet in the appropriate location in the <template>.cfg and <template>.vm .

Cities – Add, Edit City or Landmark info

Time : unknown

The city information appears to be generated from the geospatial data. There does not appear to be a configuration file to add or edit the city information.

Note: AWIPS I - CitiesInfo.txt, LocalCitiesInfo.txt file

Storm Location – Treat storm location as Polygon

Time : unknown

It is not clear how to treat a storm location as a polygon. Storm locations appear to be points.

County – percent within polygon

Time : unknown



Area - Cities

Time : unknown

The number of cities included in the warning is controlled by the <template>.cfg file in the etc/warngen folder.

To increase the number of cities included in the pathcast:

1. Navigate to /etc/warngen/thunderstorm.cfg
2. edit the file
3. increase or decrease the <numberOfPoints> tag
4. Save the file
5. Restart CAVE and test

The <template>.cfg file:

1. **closestPointsConfig:** determines how the closest points to the storm are generated
2. **numberOfPoints:** number of closest points to generate
3. **pointField:** The field out of the area field that is used for naming the point
4. **pointFilter:** The filter used to narrow the list of points

```
<closestPointsConfig>
  <numberOfPoints>2</numberOfPoints>
  <pointField>NAME</pointField>
  <pointFilter>
    <key>WARNGENLEV</key>
    <value>3</value>
    <type>EXCLUSIVE</type>
  </pointFilter>
</closestPointsConfig>
```

Note:

Increasing number of points increases the number of cities displayed in the third bullet. It is not clear what changing the value of the point filter has on the text product.

PathCast – thresholds

Time : unknown

It is not clear what affect modifications to this file have on the generated text product.

The <template>.cfg file:



1. **pathcastConfig:** If present, this indicates a track product is generated to determine the areas the storm will pass under
2. **overThreshold:** Specifies a distance in miles that indicates how close a storm can be to a location to be considered "OVER" it.
3. **nearThreshold:** Specifies a distance in miles that indicates how close a storm can be to a location to be considered "NEAR" it
4. **pointField:** The field out of the area field that is used for naming the point
5. **pointFilter:** The filter used to narrow the list of points
6. **areaNotationField:** The field used to look up the notation for the area
7. **areaField:** The field used in the area to give the area a name
8. **parentAreaField:** The field used to give the parent area a name
9. **areaNotationTranslationFile:** TranslationFile to look up an area notation (County, Parish, Municipality etc.)

```
<pathcastConfig>
<overThreshold>3.0</overThreshold>
<nearThreshold>8.0</nearThreshold>
<pointField>NAME</pointField>
<pointFilter>
  <key>WARGENLEV</key>
  <value>3</value>
  <type>EXCLUSIVE</type>
</pointFilter>
<areaNotationField>STATE</areaNotationField>
<areaField>COUNTYNAME</areaField>
<parentAreaField>STATE</parentAreaField>
<areaNotationTranslationFile>countyTypes.txt</areaNotationTranslationFile>
</pathcastConfig>
```

Area – Config

It is not clear what affect modifications to this file have on the generated text product.

The <template>.cfg file:

1. **areaConfig:** specifies how the area portion of the warning is generated
2. **pointField:** The field out of the area field that is used for naming the point
3. **pointFilter:** The filter used to narrow the list of points
4. **areaNotationField:** The field used to look up the notation for the area
5. **areaField:** The field used in the area to give the area a name
6. **parentAreaField:** The field used to give the parent area a name
7. **areaNotationTranslationFile:** TranslationFile to look up an area notation

```
<areaConfig>
<pointField>NAME</pointField>
<pointFilter>
  <key>WARGENLEV</key>
  <value>1</value>
  <type>INCLUSIVE</type>
</pointFilter>
<areaNotationField>STATE</areaNotationField>
<areaField>COUNTYNAME</areaField>
```



```
<parentAreaField>NAME</parentAreaField>  
<areaNotationTranslationFile>countyTypes.txt</areaNotationTranslationFile>  
</areaConfig>
```

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